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User's Manual (EVBM-M110 / EVBM-M107) 25

Please read this manual thoroughly and follow the **Installation** procedures to prevent any damage to the unit or any connecting device.

* *The final specifications are the actual product based.*
* *Features and functions are subject to change since the manual was written.*
  Please visit the related website to download the latest version of manual for reference.

FC CE VCI **RoHS**

---------- Introduction

Overview

Rextron 4K2K HDMI / VGA HDBaseT™ Transmitter transmits full uncompressed 4K2K video and HD audio over CATx cable of up to 70/100 meters. It not only supports resolution up to Full HD 1080p and 4K2K, but supports Deep Color and HD Audio formats as well.

The optional Graphical User Interface (GUI) function makes control easier and more effectively. The well-designed GUI can free users from giving complex commands. What's more fantastic is that it allows you to name and portray your source and display icons for user-friendly operation.

The advanced and inexpensive all-in-one connectivity technology by using low-cost and handy CATx cables, **Rextron 4K2K HDMI / VGA HDBaseT™ Transmitter** is perfect for situations like hospitality (hotels, conference rooms) and digital signage (airports, shopping malls), etc.

Features

- Transmit HDMI / VGA+audio signal over CATx cable of up to 70/100 meters
- Use HDBaseT™ technology
- Low cost standard CAT5e/6 LAN cable; advanced and inexpensive all-in-one connectivity technology
- HDTV, 3D HDTV compatible; HDCP compliant and Blu-ray ready
- Input source sequence selectable
- Support resolution up to Full HD (1920 x 1080) / UHD (3840 x 2160)
- Support Deep Color and HD Audio formats
- Plug-n-Play system without any drivers or software installation
- Ideal for hospitality (hotels, conference rooms), digital signage (airports, shopping malls), surveillance cameras, whole-home networking and point-to-point consumer applications

Unique EGO MX Functions

- Versatile port selection functions of Priority, Auto and Switch modes
- User-friendly port switching via button pressing or priority setting
- Two priority settings to start with VGA / HDMI source for different needs
- Auto-Sensing function enables the system to automatically select the latest video source

Exclusive EDID Functions

- Multi-functions for EDID setting, like EDID Copy and EDID Pre-setting, ensuring accurate output display
- Enable separately learn Audio and Video EDID for multimedia/ Home Theater system integration
- Read and store the EDID from the connecting display to the video extension

Exclusive GUI Operation Functions

- Graphically show connection status
- Most commonly used menu items are duplicated as icons on the top
- Common icons are provided
- Can name and use your own images for every source and display icon

Exclusive Link Port Functions

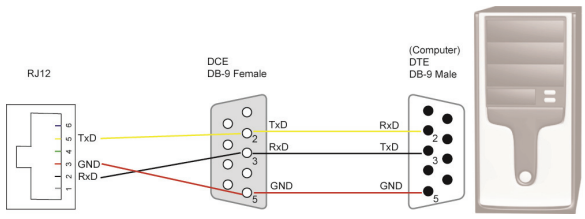
- Increase the extension distance up to 150 meter for Full HD 1080p
- Automatically save energy for increasing efficient use

Package Content

Content	Quantity
4K2K HDMI / VGA HDBaseT^{TM} Transmitter	1
Power Adapter Set	1
CAT5 cable for test	1
CD (User's Manual & GUI app)	1
Quick Start Guide	1
IR Remote Controller	1
Foot Pad Set	1

Optional
IR Sensor Kit
RJ12 Cable + RJ12 to RS232 converter*

*NOTE: If users want to use RJ12 to RS-232 converter, please follow the diagram below to properly connect the pin:



You may also need
Receiver Unit: EVBM-110R (100M) / EVBM-107R (70M)
HDMI Cable (M-to-M) 1.8m for HDMI A/V source connection

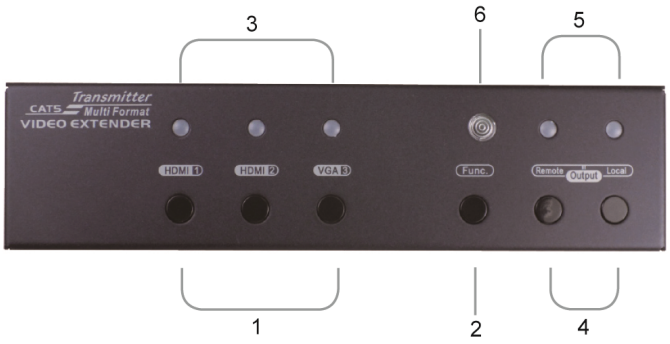
NOTE: EVBM-K107R&EVBM-K110R can select source from Transmitter to Receiver unit.

Product Family

Pair	Tx	Rx	*Description*
EVBM-M107 **EVBM-M110**	EVBM-107L EVBM-110L	EVBM-107R EVBM-110R	*70M / 100M HDMI Extender Pair*
EVBMN-M110	EVBMN-110L	EVBMN-110R	*HDMI Extender Pair with Bidirectional IR, Ethernet & Serial Extending*
	EVBMV-1371L EVBMV-1391L		*70M / 100M HDMI x 2 / VGA + Audio Transmitter with Bidirectional IR & Serial Extending*
	EVBMC-1371L EVBMC-1391L		*70M / 100M DisplayPort / HDMI x 2 / VGA + Audio Transmitter*
		EVBM-K107R EVBM-K110R	*HDMI Receiver with Scaling Function*

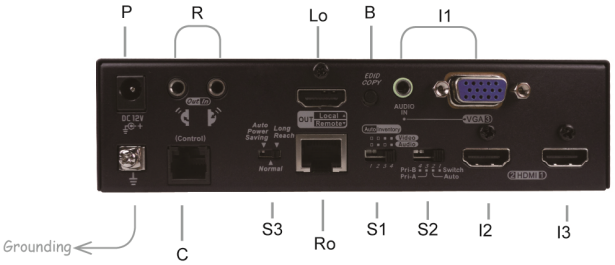
Product Description

Front Panel



1	Input Port Button	Source selection
2	Function Button	System Configuration
3	Input Port LED	Please see *LED Indicator*
4	Output Port Button	Turn ON / OFF Output Signal
5	Output Port LED	Please see *LED Indicator*
6	IR Sensor	IR remote controller sensor

Rear Panel



I1	Video Input Port	Connect to VGA + Analog stereo source
I2		Connect to an HDMI source
I3		
Ro	Remote Output Port	Connect to a receiver
Lo	Local Output Port	Connect to an HDMI display
B	EDID Copy Button	Pair with EDID Setting Switch to copy monitor's EDID
S1	EDID Setting Switch	See the diagram of *EDID Setting Switch*
S2	EGO Slide Switch	See the diagram of *EGO Slide Switch*
S3	Link Port Switch	See the diagram of *Link Port Switch*
R	IR Connector	[In] Connect to IR Receiver [Out] Connect to IR Transceiver
C	Serial Port	Connect to a serial console (PC)
P	Power Supply	Apply power to the unit

EDID Setting Switch

Mode	Video	Audio
1	Auto	Auto (Min.)
2	Auto	Inventory
3	Inventory	Auto (Min.)
4	Inventory	Inventory

EGO Slide Switch

Mode	Description
Switch	Press Select button Kn to select Source-n; all monitors display Source-n NOTE: When switching from Matrix to Switch mode, all monitors display Source-1. But if there's no source detected in Source-1, the system will automatically display the next video source (follow Priority order).
Auto	System will automatically select the latest video source for display NOTE: When switching from Matrix to Auto mode, the system automatically displays the latest video source.
Priority-A	Priority: HDMI1(High Priority) > DP* > VGA > HDMI2(Low Priority) NOTE: If there's no source detected in HDMI1 port, the system will automatically display the next video source.
Priority-B	Priority: HDMI2(High Priority) > VGA > DP* > HDMI1(Low Priority) NOTE: If there's no source detected in HDMI2 port, the system will automatically display the next video source.

* depending on model

Port Link Switch

Mode	Description
Auto Power Saving	Automatically save energy when source or monitor connected failure
Normal	Normal operation (up to 4K2K)
Long Reach	Extend distance from 100M to 150M (up to Full HD 1080p)

Installation

WARNING!
- Prior to installation, ensure to power off all devices that will be connected to this system.
- Ensure that all devices you will connect are properly grounded.
- Place cables away from fluorescent lights, air conditioners and machines that are likely to generate electrical noise.
- Please allow adequate space around the unit for air circulation.

Grounding

To prevent any damage to the product or any connecting devices, and to improve audio/video signal quality, it is important to make sure that the extender systems are properly grounded.

Device Connection

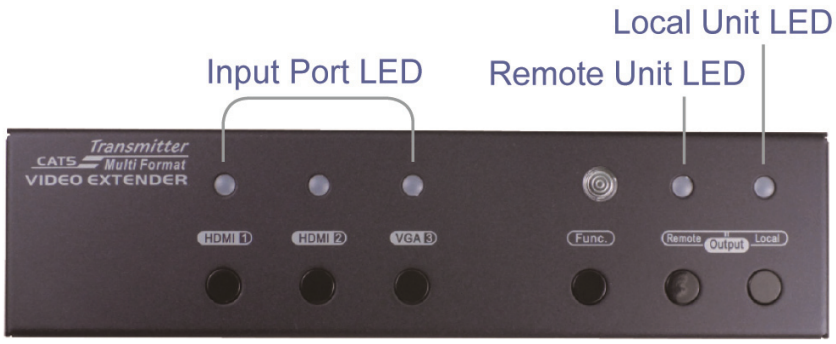
1. Use a CAT5 cable to connect to a receiver. Connect the receiver to an HDMI display.
2. Use an HDMI cable to connect the source device to the HDMI input port on the Unit. The HDMI input ports are located on the rear of the Unit. Use a HDMI cable to connect the source device to the HDMI input port and a VGA cable to connect the source device to the VGA input port on the Unit. Connect the stereo audio source to 3.5mm earphone jack (if necessary)
3. Use an HDMI cable for connection between display and the HDMI output port on the Unit (if needed).
4. Apply the proper power to the Unit; then power on all the attached sources and devices.

NOTE:
If users encounter no screen display in display connection, you may
1. make sure the device cables are correctly and firmly attached.
2. set your display device's input source as HDMI.
3. check the PC BIOS configuration about the video output setting.
4. connect your computer to the HDMI Display DIRECTLY to check if the video signal gets through.
5. slide the switches to the correct positions according to your displays.
6. apply EDID Copy to your display (see EDID Setting section).

Connection Pattern

Type	Model	Function
Rx	EVBM-107R EVBM-110R	*70M / 100M HDMI Receiver*
	EVBM-K107R EVBM-K110R	*HDMI Receiver with Scaling Function (Source console function)*

LED Indicator



Input Port LED	Video OK	Source Selected	Note
Emit Blue and go off 3 times	Yes	Yes	w/o HDCP
Flash Blue once	Yes	No	
Emit Purple and go off 3 times	Yes	Yes	w/ HDCP
Flash Purple once	Yes	No	
Emit Blue and flash Red once	No	Yes	
OFF	No	No	
Emit Blue and Flash Orange twice / Three Times			Resolution Alternation (ONLY happen in Screen Shift Mode)

Remote Unit LED	ON / OFF	CAT5 detected	Status
Flash Blue once	ON	YES	Monitor Non-detected
Steady Blue	ON	YES	Monitor detected
Emit Blue and Flash Purple once Red twice	ON	YES	HDCP doesn't match
Flash Green once	ON	NO	
OFF	OFF	YES / NO	

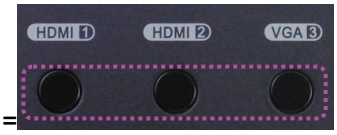
Local Unit LED	ON / OFF	Status
Flash Blue once	ON	Monitor Non-detected
Steady Blue	ON	Monitor detected
Emit Blue and Flash Purple once Red twice	ON	HDCP doesn't match
OFF	OFF	

Operation

Push Button Control

Users may select 1 from 3 and distribute to displays via push button, wireless remote and serial control. A built-in buzzer generates a high-pitched beep for a correct push button command and a short-long beep for completing a command. Otherwise, one low-pitched generates for an error, and the bad key sequence will not be forwarded to the unit.

F = Function button
RB = Remote button
LB = Local button

1 ~ 3 = Key1, Key2, Key3 = 

1. A/V Source Selection

◎ **Switch-Splitter Mode** (Switch, EGO-Auto, EGO-Priority)

For source 1-3, just press the related push button to select the desired source.
Press 1 / 2 / 3 : Select Source1 / Source 2 / Source 3

2. Turn ON/OFF Remote Output Signal

Press and hold RB for 2 sec. and release after Remote Unit LED flashes Blue: Turn ON/OFF the connection of Remote Unit

Press and hold LB for 2 sec. and release after Local Unit LED flashes Blue: Turn ON/OFF Local output port

3. EDID Setting

In some cases display problems may occur due to incorrect EDID communication between the display monitor and the unit or inappropriate EDID data programmed by display manufactures. This function allows the system either to read the necessary EDID information from the unit or to copy EDID from EDID compliant displays. For more details and functions, please consult the following statements.

3-1. EDID Copy

If the unit is insufficient for EDID of the attached displays, it is suggested to copy EDID from the displays. Before starting, slide EDID Setting Switch to the desired position.

Mode	Video	Audio	
1	Auto	Auto (Min.)	--
2	Auto	Inventory	Copy Audio EDID
3	Inventory	Auto (Min.)	Copy Video EDID
4	Inventory	Inventory	Copy all EDID

Copy Remote Monitor EDID

Step 1. Apply power to the unit.
Step 2. Use CAT5 to connect Remote unit to Local unit and the (EDID compliant) monitor connects to the Remote Unit. Power on the monitor.
Step 3. Press and hold the button “EDID COPY” around 3 sec. and release the button RIGHT AFTER the Remote LED flashes GREEN.
Result. If the Remote LED returns to normal status, indicating that the EDID Copy is completed.

Copy Local Monitor EDID

Step 1. Apply power to the unit.
Step 2. Connect the (EDID compliant) monitor to local output port “Local OUT” of the Unit and power on the monitor.
Step 3. Press and hold both of the buttons “EDID COPY” around 6 sec. and release the button RIGHT AFTER the Local LED flashes GREEN.
Result. If the Local LED returns to normal status, indicating that the EDID Copy is completed.

Factory Default Setting (for all settings)

Step 1. Apply power to the unit.
Step 2. Press and hold both of the buttons “EDID COPY” around 9 sec. and release the button RIGHT AFTER the Local LED flashes BLUE.
Result. If the Local LED returns to normal status, indicating that the Factory Default Setting is completed.

press and hold EDID Copy
3 sec. [Remote LED flash Green]
copy Remote Unit EDID
6 sec. [Local LEDs flash Green]
copy Local Unit EDID
9 sec. [Local LED flash Blue]
Factory Default

Otherwise, the LED flashes RED indicating that:
a. The monitor is not properly connected.
b. The monitor is not powered on.
c. EDID data of the monitor is not applicable.
d. The CAT5 cable is not well-connected.

3-2. EDID Emulation

After EDID Copy, you may slide EDID Setting Switch to the desired position and apply the copied EDID to the display.

Mode	Video		Audio	
1	Va).	Auto	Aa).	Auto (Min.)
2	Va).	Auto	Ai).	Inventory
3	Vi).	Inventory	Aa).	Auto (Min.)
4	Vi).	Inventory	Ai).	Inventory

Va).	Video Auto Mixing:	Automatically optimize all valid video outputs for minimum requirement
Aa).	Audio Auto Mixing:	Automatically perform the minimum audio format of all attached displays
Vi).	Video Inventory:	After copying Video EDID, use the copied Video EDID to the connected display
Ai).	Audio Inventory:	After copying Audio EDID, use the copied Audio EDID to the connected display

4. EQ Adjustment

To optimize video quality, users can adjust the video equalization (sharpness) for all video input ports through push button configuration. Since 8 levels for EQ adjustment are provided, the Remote Unit LED flashes BLUE to indicate level 1-4 is selected and while it flashes GREEN indicating level 5-8 selected.

Tip: Double-click F → press 3 (enter EQ Adjustment mode)
→press 3 (press 1~8 times based on video quality. 8 levels: Blue-level 1-4; Green-level 5-8)
→press F

5. Stand-by Mode

To have the system switch to stand-by mode, Press and hold both of RB & LB buttons for 3 sec and release right after the Remote and Local Unit LED flash Green. Then when the Remote and Local Unit LED flashes BLUE per 3 seconds, the system is in the stand-by mode. And just follow the same steps to wake up from stand-by mode.

Tip: press RB & LB (3sec.) → Status LED flashes GREEN → release RB & LB

6. Screen Shift Mode (VGA Input ONLY)

Step 1. Press two buttons (**3** & **F**) simultaneously over 2 sec. and release the buttons RIGHT AFTER

L3 (VGA LED) turns to Pale Blue.

Step 2. Press left button (**1**) or right button (**2**) to adjust image's position.

NOTE:

1. The system will automatically retain user's last setting.
2. Max. horizontal image displacement is 50 steps.
3. The system will automatically escape from shift mode if no activity is detected within 15 seconds, or directly press the two buttons simultaneously over 2 sec. again to leave the shift mode right away.

7. Resolution Alteration Mode (VGA Input ONLY)

Under some particular video resolution issue, L3 (VGA LED) will turn to emit Blue and flash Orange twice / three times when catching multiple similar video timing in **Screen Shift Mode**.

Step 1. Enter in the Screen Shift Mode

Step 2. Press the button (**3**) over 2 sec.

Step 3. LED flashes Purple once indicating the setting working

NOTE:

1. VGA LED emits Blue and flashes Orange twice meaning DVI output. It is HDMI output when the LED emits Blue and flashes Orange three times
2. The system will automatically retain user's last setting.
3. Press the button over 2 sec. again to select next available resolution or switch back to the previous resolution.

IR Remote Control

Users can achieve the remote job with the range of 5 meters. See the following for more operation steps.

NOTE: The numeric keys on the left of the controller represents each output on the rear panel (marked in black) and while the right stands for the input displays (marked in blue). For other function keys, please refer to the picture as shown on the right of this page.

Please note the following descriptions:

Mn (output/monitor): buttons 1 ~ 2 on the left side of remote controller

Sn (input/source): buttons 1 ~ 3 on the right side of remote controller

1. A/V Source Selection

◎ **Switch-Splitter Mode (Switch, EGO-Auto, EGO-Priority)**

For source 1-3, just press the related push button on the right side of the controller.

Tip: Press Sn (right): Select Source-n

2. Turn ON/OFF Remote Output Signal

To turn on or off remote output signal, you may press the output port first, and then press VIDEO.

Tip: Press Mn (left) and then press VIDEO (toggle) (n=1~4)

3. EQ Adjustment

To optimize video quality, users can adjust the video equalization (sharpness) for all video output ports through push button configuration. Since 8 levels for EQ adjustment are provided, the Remote Unit LED flashes GREEN to indicate level 1-4 is selected and while it flashes BLUE indicating level 5-8 selected. Press VIDEO and press 3 to enter video adjustment mode. Next, press 3 repeatedly to adjust EQ level. And lastly press VIDEO to exit the setting.

Tip: VIDEO → 3 (enter this mode) → 3 (press 1~8 times based on video quality) → VIDEO

4. Multiple Units Application

Up to 16 units can share one remote controller. In order to avoid ambiguities in receiving commands simultaneously, ID setting for each unit is strongly suggested.

4-1. ID Setting via IR Remote Controller

This function is designed to name the units via front panel push buttons and remote controller. Please follow the steps as shown below.

Step 1 Power OFF the unit.
Step 2 Press and hold **1** & **2** on the panel of the unit.
Step 3 Power ON the unit.
Step 4 Release **1** & **2** RIGHT AFTER Power LED flashes red.
Step 5 IMMEDIATELY (within a second or two) press one of the numbers from 1 to 10 or +10 and 1~6 on the **RIGHT** side of IR remote controller as the unit controller ID.
For example, press the number 4 (right). This sets the unit IR remote controller ID as 4. For ID number 11~16, users may follow the step bellow. To set the unit IR remote controller ID as 15, press the number +10 and then 5 (right) on the right side of on the controller.
The idle time out is 10 sec.

NOTE:
1. Take Steps 1 to 5 if controller ID set-up for more than one unit is needed.
2. Each unit should have a unique control ID to avoid any confusion on receiving commands from the IR remote controller simultaneously.

To reset ID, follow above Step 1 to Step 4, then
Step 5 IMMEDIATELY (within a second or two) press VIDEO of IR remote controller.

4-2. ID Operation via IR Remote Controller

Each unit will accept the same signal from IR remote controller whenever the units are powered up. After numbering the unit, users need to press and hold "**SHIFT"** and then press **ID** (n) on the IR remote controller first. Then, this unit will beep once. It means this unit is ready to accept the oncoming commands via the IR remote controller.

Tip: SHIFT + m (*m represents the **RIGHT** numeric keys)

NOTE:
Because all units assume their IDs are active, it's required to press **"SHIFT" + ID** again to give commands to a certain unit after re-powering up.

Specifications

Model		Transmitter Unit	
		EVBMV-1371L	EVBMV-1391L
Input		HDMI x 2 VGA + Analog Stereo x 1	
Out		HDMI x 1 RJ45 x 1	
LED Indicator		Source x 3 Remote x 1, Local x 1	
Video Resolution (max.)		UHD (3840 x 2160)	
Extension Distance		HDMI 70M @ Full HD (1920 x 1080) 35M @ UHD (3840 x 2160) VGA 70M @ Full HD (1920 x 1080)	HDMI 100M @ Full HD (1920 x 1080) 70M @ UHD (3840 x 2160) VGA 70M @ Full HD (1920 x 1080)
EDID Configuration Switch	Video	Auto / Inventory	
	Audio		
Push Button		Port Select x 3, Function x 1 Remote x 1, Local x 1, EDID Copy x 1	
Mode Configuration		Switch / Auto / Pri-A / Pri-B	
Link Port Configuration		Auto Power Saving / Normal / Long Reach	
Serial Port (for control)		RJ12 x 1	
Power Supply		DC 12V	
Enclosure		Metal	
H x W x D (mm)		40 x 160 x 100	
Weight (g)		645-650	

Model		Transmitter Unit	
		EVBMC-1471L	EVBMC-1491L
Input		HDMI x 2 VGA + Analog Stereo x 1 DisplayPort x 1	
Out		HDMI x 1 RJ45 x 1	
LED Indicator		Source x 3 Remote x 1, Local x 1	
Video Resolution (max.)		UHD (3840 x 2160)	
Extension Distance		HDMI/DisplayPort 70M @ Full HD (1920 x 1080) 35M @ UHD (3840 x 2160) VGA 70M @ Full HD (1920 x 1080)	HDMI/ DisplayPort 100M @ Full HD (1920 x 1080) 70M @ UHD (3840 x 2160) VGA 70M @ Full HD (1920 x 1080)
EDID Configuration Switch	Video	Auto / Inventory	
	Audio		
Push Button		Port Select x 3, Function x 1 Remote x 1, Local x 1, EDID Copy x 1	
Mode Configuration		Switch / Auto / Pri-A / Pri-B	
Link Port Configuration		Auto Power Saving / Normal / Long Reach	
Serial Port (for control)		RJ12 x 1	
Power Supply		DC 12V	
Enclosure		Metal	
H x W x D (mm)		40 x 160 x 100	
Weight (g)		650-660	

---------- Serial Configuration

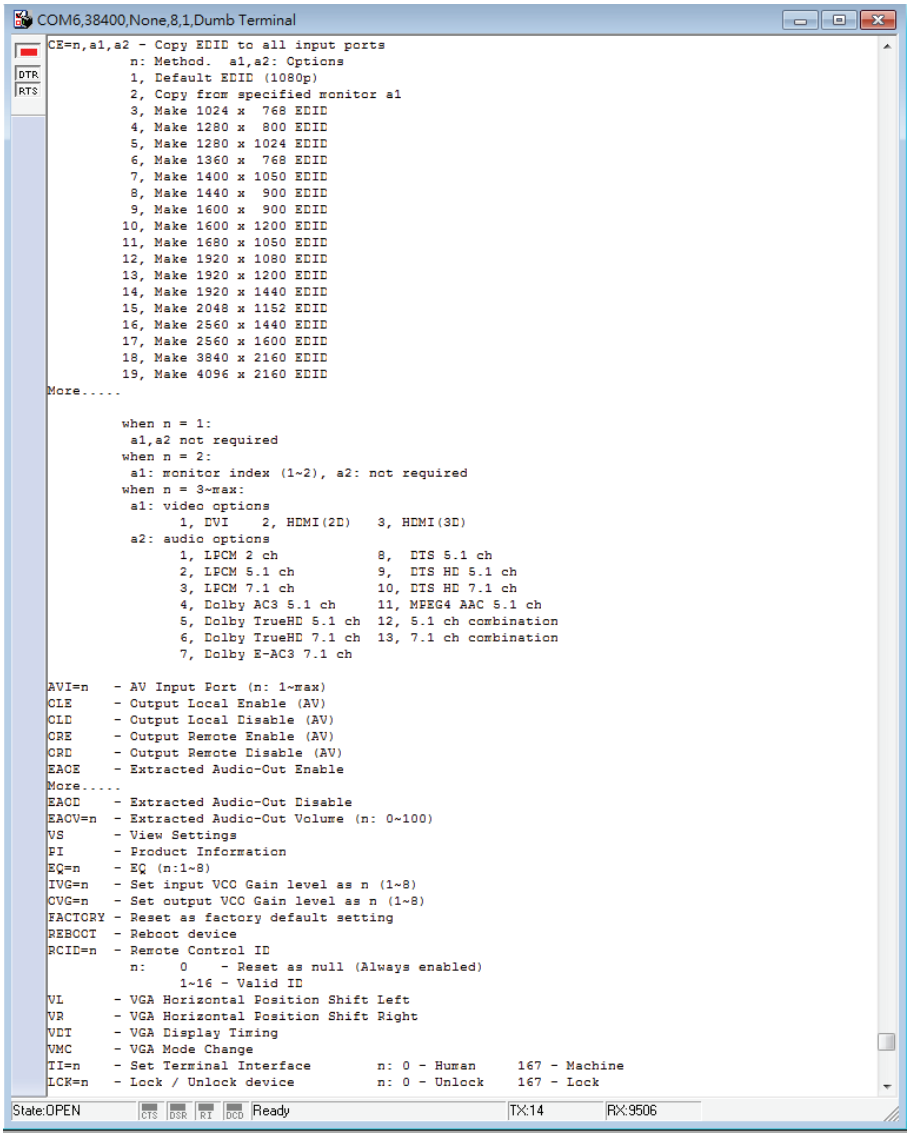
The **4K2K HDMI / VGA HDBaseT™ Transmitter**'s built-in serial interface allows users to control the unit via serial control. Please follow the installation and operation steps as shown below.
If there's no serial connector on your computer, you may use USB-to-serial adapter for connection.

The configuration of controller's serial port is shown as below.

Baud Rate	38,400 bps
Data Bits	8
Parity	None
Stop Bits	1
Flow Control	None

I. Simple Serial Connection

The following window is an example of Windows XP HyperTerminal.
Connect and power on the Unit, and then set up serial configuration, such as correct baud rate and com port.


COM6,38400,None,8,1,Dumb Terminal
CE=n,a1,a2 - Copy EDID to all input ports
n: Method. a1,a2: Options
1, Default EDID (1080p)
2, Copy from specified monitor a1
3, Make 1024 x 768 EDID
4, Make 1280 x 800 EDID
5, Make 1280 x 1024 EDID
6, Make 1360 x 768 EDID
7, Make 1400 x 1050 EDID
8, Make 1440 x 900 EDID
9, Make 1600 x 900 EDID
10, Make 1600 x 1200 EDID
11, Make 1680 x 1050 EDID
12, Make 1920 x 1080 EDID
13, Make 1920 x 1200 EDID
14, Make 1920 x 1440 EDID
15, Make 2048 x 1152 EDID
16, Make 2560 x 1440 EDID
17, Make 2560 x 1600 EDID
18, Make 3840 x 2160 EDID
19, Make 4096 x 2160 EDID
More.....
when n = 1:
a1,a2 not required
when n = 2:
a1: monitor index (1~2), a2: not required
when n = 3~max:
a1: video options
1, DVI 2, HDMI(2D) 3, HDMI(3D)
a2: audio options
1, LPCM 2 ch 8, DTS 5.1 ch
2, LPCM 5.1 ch 9, DTS HD 5.1 ch
3, LPCM 7.1 ch 10, DTS HD 7.1 ch
4, Dolby AC3 5.1 ch 11, MPEG4 AAC 5.1 ch
5, Dolby TrueHD 5.1 ch 12, 5.1 ch combination
6, Dolby TrueHD 7.1 ch 13, 7.1 ch combination
7, Dolby E-AC3 7.1 ch
AVI=n - AV Input Port (n: 1~max)
CLE - Output Local Enable (AV)
CLD - Output Local Disable (AV)
CRE - Output Remote Enable (AV)
CRD - Output Remote Disable (AV)
EACE - Extracted Audio-Out Enable
More.....
EACD - Extracted Audio-Out Disable
EACV=n - Extracted Audio-Out Volume (n: 0~100)
VS - View Settings
PI - Product Information
EQ=n - EQ (n:1~8)
IVG=n - Set input VCO Gain level as n (1~8)
OVG=n - Set output VCO Gain level as n (1~8)
FACTORY - Reset as factory default setting
REBOOT - Reboot device
RCID=n - Remote Control ID
n: 0 - Reset as null (Always enabled)
1~16 - Valid ID
VL - VGA Horizontal Position Shift Left
VR - VGA Horizontal Position Shift Right
VDT - VGA Display Timing
VMC - VGA Mode Change
TI=n - Set Terminal Interface n: 0 - Human 167 - Machine
LCK=n - Lock / Unlock device n: 0 - Unlock 167 - Lock
State:OPEN
Ready
TX:14
RX:9506

II. GUI over Serial

A. Installing Application

The serial console (PC) running Windows 98/2000/XP/Vista/7 is required to install the appropriate software. Please follow the step-by-step instructions as listed below.
All prompt screens and dialog boxes shown in this section are for Windows 98 and above. Some dialog boxes and folders may slightly different in other versions of Windows.

Install the "**AV Console Center**" driver (Windows 98 and above)

Insert the CD into the CD/DVD-ROM drive and browse:
There are two ways to install the driver.

a) Manually copy the file "**TuApp.exe**" to the Windows platform and run it directly.
b) Run "**Setup.exe**" to automatically install the utility on the Windows platform. The "**Setup.exe**" will create a shortcut "**AV Console Center**" on Windows' desktop, and a program group "**AV Console Center**".

B. Uninstalling Application

To uninstall the driver, it depends on the installation method you have applied.

a) If you have manually installed the utility, you can just manually delete the file "**TuApp.exe**" from the Windows platform.
b) If you have installed "**Setup.exe**" before, you have two ways to uninstall the application. One is that uninstall "**AV Console Center**" from Windows' Control Panel. The other is by clicking the icon "Uninstall" from the "**AV Console Center**" program group.

C. Description & Operation

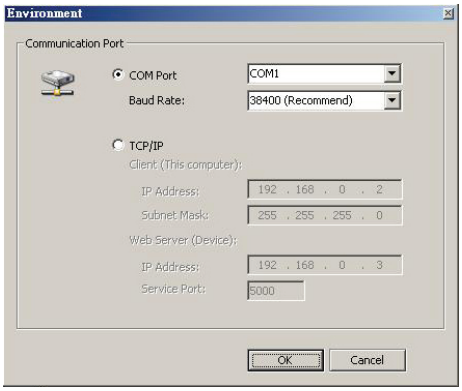
The Graphical User Interface (GUI) is designed for users to operate easier and friendlier. We divide this application into two parts—Basic Operation and Advanced Operation. For more information, please refer to the following statements.

Basic Operation

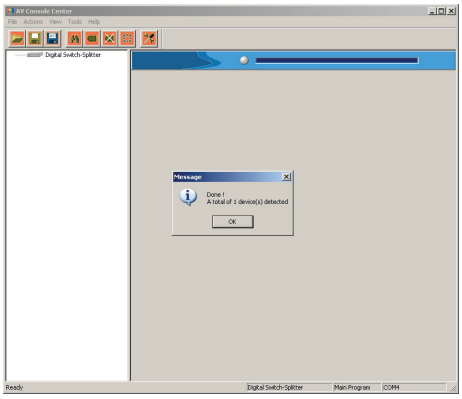
1. GUI Connection

After software installation, connect the *DB9 RS-232 serial cable* (straight type male-female) to serial port of the **Switch-Splitter**. And connect the other end to the serial port (COM1, COM2…) of your computer. Next, open *Program files* on Windows and then click "*AV Console Center*" to start GUI operation.

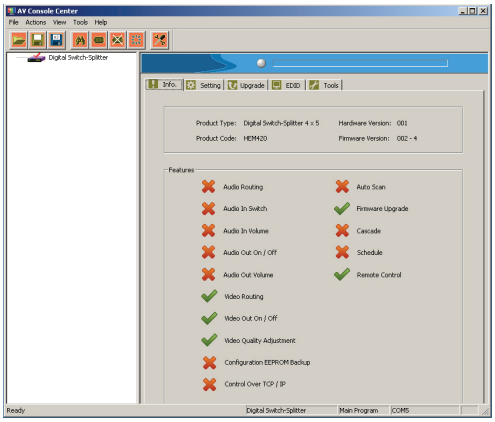
Step 1. Check "COM Port" and choose the proper serial port you connect, such as COM1, and set the Baud Rate as "38400".



Step 2. A dialog box will pop out indicating device(s) detected.

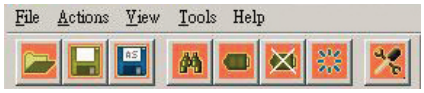


Step 3. Double-click "Digital Switch-Splitter" on the left block. (There are other ways to detect the device. Please refer to *Toolbar Guidance / Action*.)



2. GUI Toolbar Guidance

You can see the toolbar on the upper-left corner. Both top toolbars are identical in functions. For further information, please refer to the following guidance.



2.1 File: Allow users to open or save topology files. A topology is a usually schematic description of the arrangement of a network, including its nodes and connecting lines. So it is suggested saving a topology file.

2.1	Option	Function
1	Open Existing Topology	Open pre-stored topology file
2	Save Current Topology	Allow users to save current topology file in the software installed location
3	Save Current Topology As…	Allow users to save current topology file in the requested location
4	Exit	Exit the system

2.2 Actions: Detect all devices or connect the selected device.

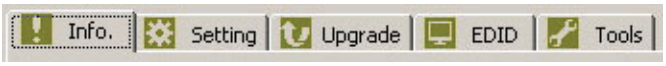
When checking *Detect All Devices*, it will show the dialog box below which means successfully detect the device.

2.3 View: Show or hide the (*Icon) Toolbar* / *Status Bar* (on the bottom of the window)

2.4 Tools: Select *Environment* to set up COM Port and Baud Rate or set up TCP/IP address for the device..

2.5 Help: Show the software version and copyright information.

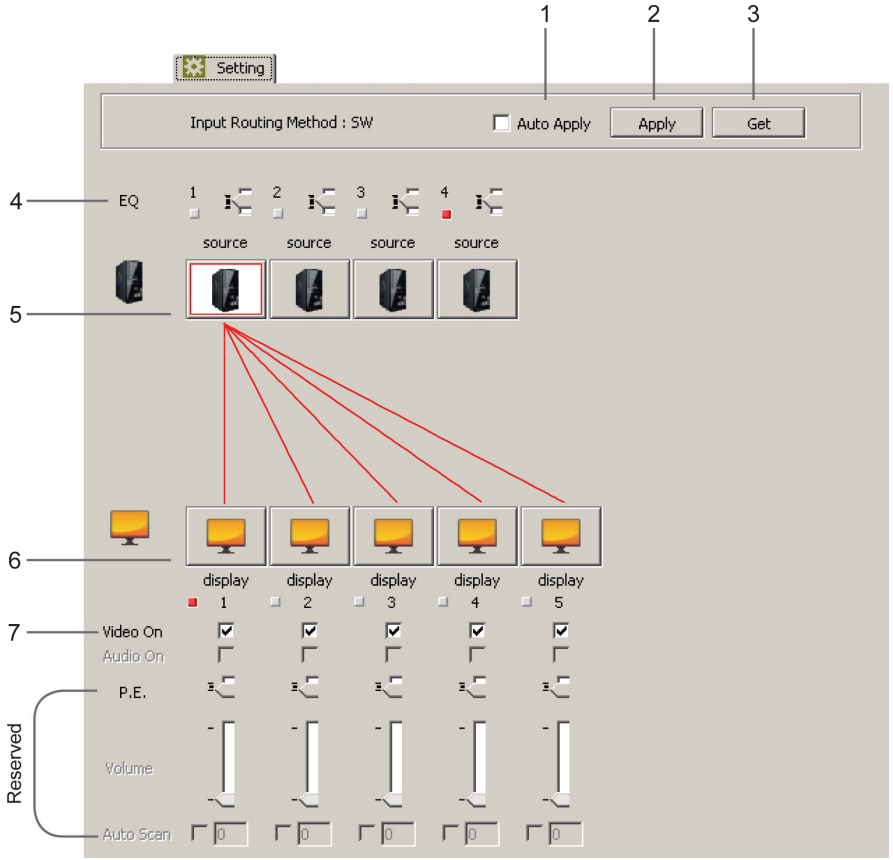
3. GUI Function Description



The following will describe the overall functions. And four sections will be included: Info, Setting, Upgrade, EDID and Tools.

3.1 Info: Show information and features.

3.2 Setting: In this section, users can set up port connection, enable or disable audio/video separately, set scan time rate, etc. By default, the system will automatically apply source 1 routing to all displays as shown below.



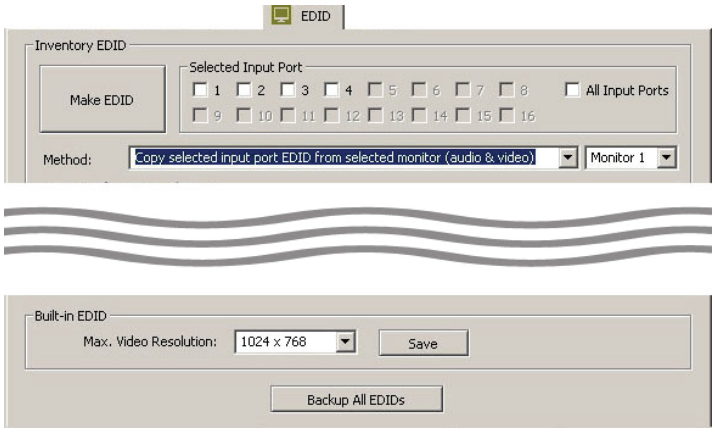
3.2	Option	Function
1	Auto apply	Automatically apply settings. It is not suggested checking this item for it may result in loading down the system.
2	Apply	To bring the settings into action.
3	Get	Detect and show the current setting status for users may operate the unit via front panel push button or IR remote controller
4	EQ	Adjust the video equalization (sharpness)
5	Source Icon	Double-click the icon and there will be a pop-up menu. Users can change the picture (*.ico file* with 32x32 or 36x36 pixel) and give an alias for the source or display. ◆ Linking: Click one of the source icons and then click “Apply” to bring the settings into action.
6	Display Icon*	
7	Video On	Check/ uncheck the item to turn on/off the display

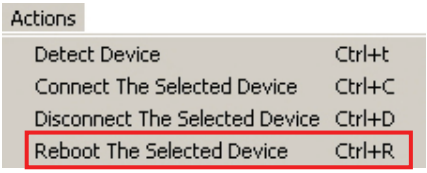
* Here’s the comparison table of the monitor port number on GUI and the output port on the Unit.

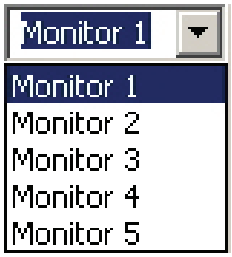
display 1	Local Output Port
display 2	Remote OUT 1
display 3	Remote OUT 2
display 4	Remote OUT 3
display 5	Remote OUT 4

Advanced Operation

3.3 EDID: Users can not only select the desired ports to copy EDID via multiple methods, but also use built-in EDID for all connected monitors.

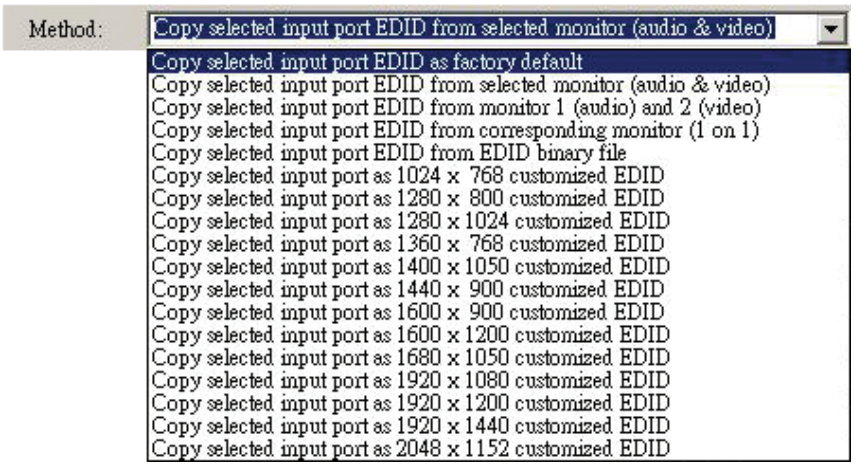


3.3	Option		Function
1	Inventory EDID	Make EDID	Copy EDID to the selected input port(s).
2		Method	Multiple methods of EDID copy are provided. See the diagram below.
3	Built-In EDID (optional)		All connected monitors use the selected built-in EDID; resolution ranging from *1024 x 768* to *2048 x 1152*. After saving, it is required to reboot the system (click "Reboot The Selected Device" icon on the top toolbar). 



Here's the comparison table of the monitor port number on GUI and the output port on the Unit.

Monitor 1	Local Output Port
Monitor 2	Remote OUT 1
Monitor 3	Remote OUT 2
Monitor 4	Remote OUT 3
Monitor 5	Remote OUT 4


Method:
Copy selected input port EDID from selected monitor (audio & video)
Copy selected input port EDID as factory default
Copy selected input port EDID from selected monitor (audio & video)
Copy selected input port EDID from monitor 1 (audio) and 2 (video)
Copy selected input port EDID from corresponding monitor (1 on 1)
Copy selected input port EDID from EDID binary file
Copy selected input port as 1024 x 768 customized EDID
Copy selected input port as 1280 x 800 customized EDID
Copy selected input port as 1280 x 1024 customized EDID
Copy selected input port as 1360 x 768 customized EDID
Copy selected input port as 1400 x 1050 customized EDID
Copy selected input port as 1440 x 900 customized EDID
Copy selected input port as 1600 x 900 customized EDID
Copy selected input port as 1600 x 1200 customized EDID
Copy selected input port as 1680 x 1050 customized EDID
Copy selected input port as 1920 x 1080 customized EDID
Copy selected input port as 1920 x 1200 customized EDID
Copy selected input port as 1920 x 1440 customized EDID
Copy selected input port as 2048 x 1152 customized EDID

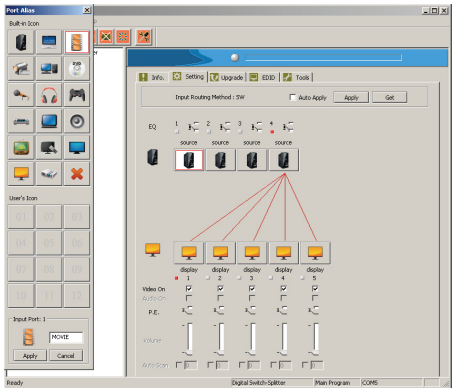
Method	Operation Steps
Copy selected input port EDID as factory default	Step 1. Check the desired input port(s) or check *All input ports* to select all. Step 2. Click *Make EDID*.
Copy selected input port EDID from selected monitor (audio & video)	Step 1. Check the desired input port. Step 2. Select the desired *Monitor* (next to *Method*) Step 3. Click *Make EDID*.
Copy selected input port EDID from corresponding monitor (1 on 1)	Step 1. Check the desired input port(s) or check *All input ports* to select all. Step 2. Click *Make EDID*.
Copy selected input port EDID from *EDID binary file	*EDID binary file: A file that store EDID information Step 1. Check the desired input port(s) or check *All input ports* to select all. Step 2. Click *Make EDID*. Step 3. Select the desired binary file.
Copy selected input port as **1024 x 768* customized EDID	*Customized EDID: selectable resolution ranging from *1024 x 768* to *2048 x 1152* Step 1. Check the desired input port(s) or check *All input ports* to select all. Step 2. Click *Make EDID*.

3.4 Tools: Allow users to set up Remote Controller ID. Up to 16 units can share one remote controller. Therefore, it is designed to name the units for fear of confusion on receiving commands simultaneously.

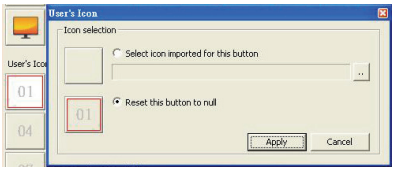
◆ **Changing Source/Display Icon**:

Double-click the source/display icon and there will be a pop-up window. Users may change the icon and name the selected source or display.

1. Name the display/source: click the corresponding icon and insert any name you want.
2. Change the icon
a) Built-in Icons:
The GUI application provides commonly used icons (*Built-in Icons*) as shown on the upside of pop-up window.

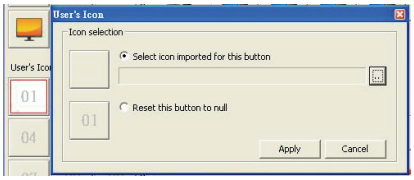


b) User's Icon - Reset the button to null
As shown on the downside of pop-up window; double-click the icon (01-12) and following by one dialogue box. Click this option to set the icon as blank.



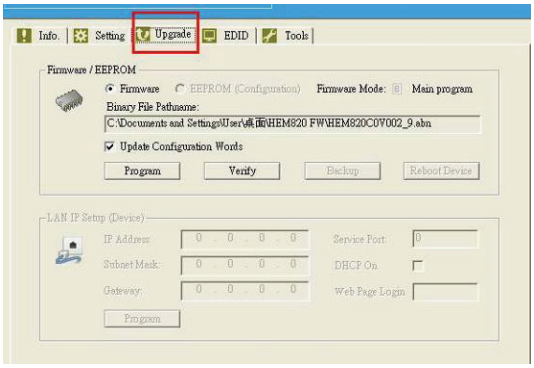
c) User's Icon - Import icon file (.ico) for this button

As shown on the downside of pop-up window; double-click the icon (01-12) and following by one dialogue box. You may upload your own icon but it should be *.ico file* with 32x32 or 36x36 pix.

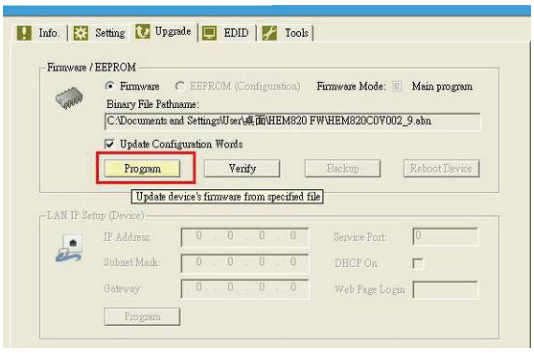


D. Firmware Upgrade

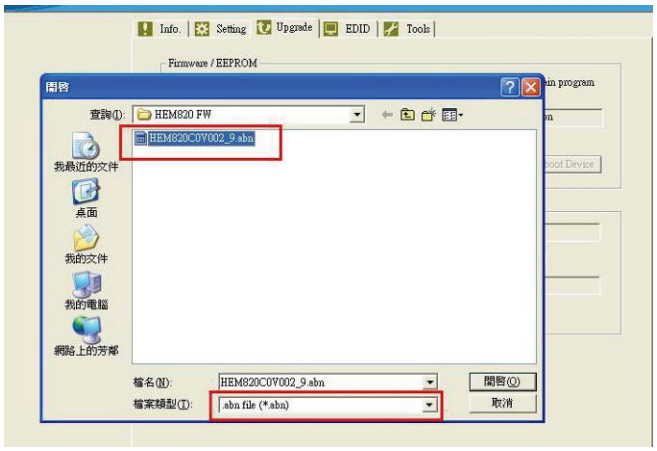
Step 1. Connect the device and then open "Upgrade" page



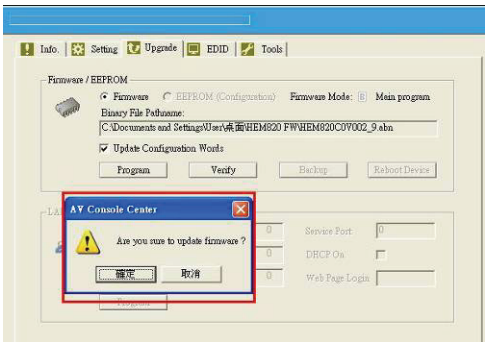
Step 2. Click “Program”



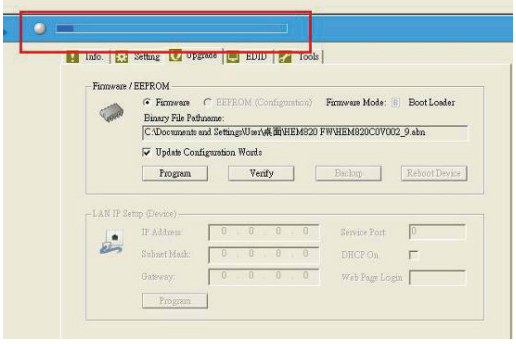
Step 3. Select a target firmware file (.abn)



Step 4. Click “Yes” to start upgrading

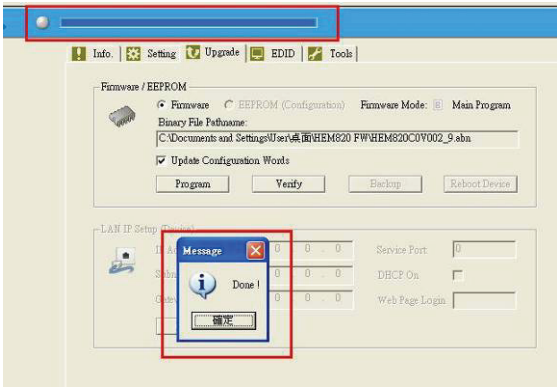


While the upgrade is being processed, you may see the red tool bar is running.

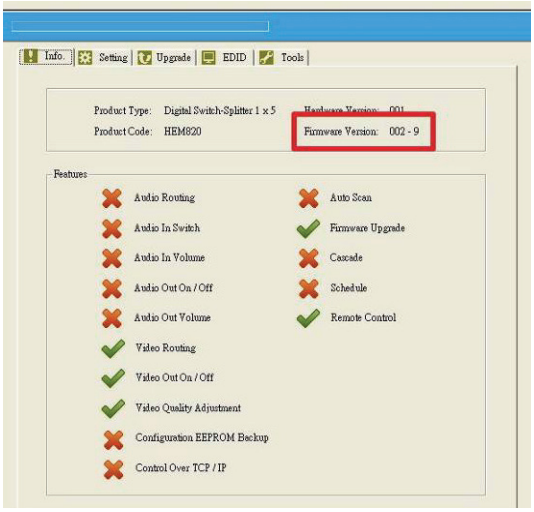


NOTE: Do not turn off power during the upgrading.

Step 5. If the upgrade is completed with success, it will pop up a window and then click “Yes.”



Finally you may check the firmware version on “Info” page.



---------- Appendices

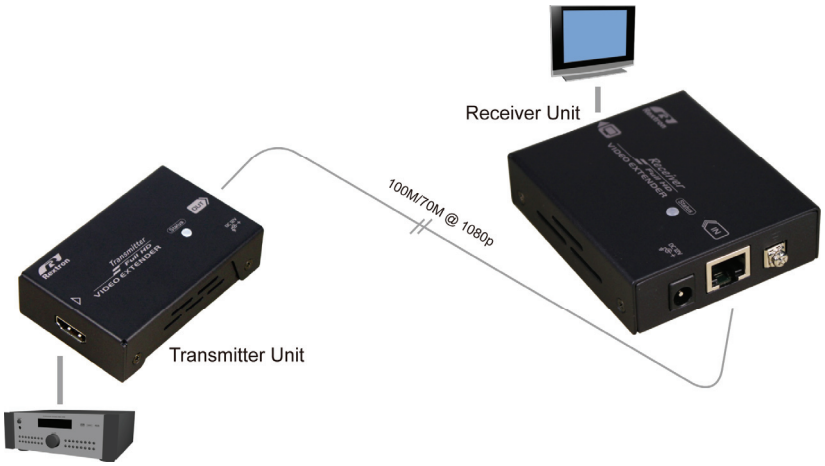
User's Manual (EVBM-M110 / EVBM-M107)

The **Transmitter** need receivers (EVBM-110R / EVBM-107R) for each output port. The following shows the receivers' instruction manual.

4K2K HDMI Extender over CAT5

Model	Tx	Rx	Extension Distance
EVBM-M110	EVBM-110L	EVBM-110R	100M
EVBM-M107	EVBM-107L	EVBM-107R	70M

◆ Connection Pattern



◆ LED Indicator

LED / Unit	Status		
	Power on	Link OK	No video source or monitor connected
Tx	Green	Blue	Flashing blue & green
Rx	Red	Blue	Flashing blue & red

The quality of the output signal will depend largely upon the quality of video source, cable, and display device used. Low-quality cables degrade the output signal causing elevated noise levels. Use the proper cable and make sure the display device can handle the resolution and refresh rate selected.

◆ Specifications

Model	Transmitter Unit EVBM-110L EVBM-107L	Receiver Unit EVBM-110R EVBM-107R
Input → Output	HDMI → RJ-45	RJ-45 → HDMI
LED Indicator (Link / Video status)	x 1 (Dual Color)	x 1 (Dual Color)
Video Resolution (max.)	Full HD (1080p@60Hz)	
Extension Distance	EVBM-M110: 100M EVBM-M107: 70M	
Power Supply	DC 12V (Phantom Power)	
Enclosure	Metal	
Weight (gram)	120	195
H x W x D (mm)	22 x 52 x 80	25 x 67 x 80

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